

REMARKS

Claims 2, 3, 5, 6, 12-16 and 22-25 are all the claims presently pending in the application. Claims 2, 5, 6, 12, 13 and 16 stand allowed. By this Amendment claim 3, is amended. Claims 22-25 are added. Applicant concurrently files herewith a petition and fee for a three-month extension of time.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicants specifically state that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

With respect to the prior art rejections, claims 3, 14 and 15 stand rejected under 35 U.S.C. §102(b) as being anticipated by Moretz, et al. (U.S. Patent No. 5,845,749).

The rejection is respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

The invention as recited in independent claim 3, for example, is directed to a string type air damper including a cylinder formed in a tubular shape, defining a guide hole at one end portion thereof, a monolithic piston having a string member portion, which moves in the cylinder, a helical spring for biasing the piston toward the other end portion of the cylinder, and the string member portion is guided from inside of the cylinder to outside thereof through the guide hole so that the belt-shaped string member is bendable and guidable along the arcuate face. The string member portion has a flat belt shape, the guide hole of the cylinder has a flat opening and a smooth arcuate face continuing to a wide width edge of the opening, and the string member portion having the belt shape is bent and guided along the arcuate face of the guide hole (Application at page 3, line 22-page 4, line 2).

This structure is important because with this structure, it is unnecessary to form a hook on the piston and a loop at a base portion of a string member to attach the string member to the piston. Moreover, because of the flat belt shape of the string member portion, the strength of the string member portion is increased (Application at page 15, lines 10-19; page 12, lines 21-23).

In a conventional string type air damper, as described in the Background of the present Application, the string member and the piston are formed separately so it is necessary

to form a loop member at the base end of the string member to attach the string member to the piston. This structure may result in difficulties in assembly and unreliability in usage due to separation of the parts (Application at page 2, line 21-page 3, line 3).

In contrast, an exemplary aspect of the claimed invention may allow for ease of assembly and reliability during use of the air damper, as well as an increase in the strength of the string member (Application at page 5, lines 1-9).

The applied reference fails to disclose or suggest the claimed invention.

II. THE PRIOR ART REJECTION

The Moretz et al reference rejection

In rejecting claims 3, 14 and 15 under 35 U.S.C. §102(b) as being anticipated by Moretz et al. (Moretz), the Examiner alleges that Moretz discloses all of the features of the rejected claims. However, there are elements of the rejected claims that are not disclosed or suggested by Moretz.

For example, Moretz fails to disclose or suggest, a string type air damper including ... a monolithic piston having a string member portion, which moves in the cylinder, or that the string member portion has a flat belt shape, the guide hole of the cylinder has a flat opening and a smooth arcuate face continuing to a wide width edge of the opening so that the belt-shaped string member is bendable and guidable along the arcuate face, and the string member portion having the belt shape is bent and guided along the arcuate face of the guide hole.

Moretz discloses a damped linear motion absorber 10' that includes a cylinder 12' and either a piston rod 36 or, in another embodiment, a flexible strand 106 disposed within the cylinder that passes through a central hole 102. An end of the flexible strand 106 includes a terminal head 108 that engages the piston hub 82 (col. 5, line 45-col. 6, line 7; Figs. 9, 10).

It is alleged in the Office Action that the flexible strand 106 and the central hole 102 correspond to the claimed string member and guide hole, respectively.

However, in Moretz, the piston rod 36 is described as consisting of a substantially rigid tubular portion and the flexible strand 106 is defined as be formed of a metal cable. As shown in the figures of Moretz and described in the accompanying text, the flexible strand is also rod shaped. For example, the flexible strand is described as having a diameter slightly smaller than the diameter of the cap hole 102. Moreover, one of skill in the art would readily recognize the common use of "metal cables," in such devices. These cables are merely wires

well known to have a cylindrical shape.

In contrast, as recited in the specification, the string member 5 is formed into a belt-shape so that the string member itself can be strengthened. The string member 5 can be flexibly bent and guided along the arcuate face 14 of the guide hole 1a (page 12, last five lines in the specification).

In the Response to Applicant's Arguments section of the Office Action, the Examiner states that no special definition has been given to a "flat belt shape" and therefore a broad interpretation of a "flat belt shape" may include the shape of the flexible strand 106 (i.e., a cylindrical wire).

Applicant submits that the words in a claim are to be given their plain meaning (i.e., the ordinary and customary usage by those of skill in the art) unless the Applicant has provided a clear definition in the specification. Thus, although Applicant may give a claim term a special meaning, there is no requirement to define each term in a claim to avoid an unreasonably broad interpretation. Instead, when interpreting claim language, the Examiner should interpret the pending claims using "their broadest reasonable interpretation consistent with the specification" (MPEP §2111).

Thus, when read in light of the specification, including the drawings, a "flat belt shape" cannot be interpreted so broadly as to include a cylindrical cable. In other words, the Examiner should interpret the term "flat belt shape" in accordance with its plain meaning.

Although the Examiner admits that Morentz fails to disclose a string member having a flat belt shape, the Examiner alleges that the claimed shape is merely a design choice (change in shape).

However, the structure imparted by the "flat belt shape" provides added strength to the string member as clearly disclosed in the Specification at page 12, lines 21-23. In any case, to sustain a conclusion of obvious design choice the feature must be suggested by the prior art. The prior art must provide a motivation or reason for a worker of ordinary skill in the art, without the benefit of Applicants' specification, to make the necessary changes in the reference device (MPEP §2144.04(f)).

In contrast, the Examiner's conclusion of obviousness is unsupported by any prior art evidence. Instead, the Examiner merely makes the conclusory statement, that the structure of the string member is an "obvious variation."

Further, as discussed above, Morentz fails to disclose or suggest that the guide hole of

the cylinder has a flat opening and a smooth arcuate face continuing to a wide width edge of the opening. Instead, the central hole 102 is of the same round shape as the flexible strand 106. For example, Morentz clearly describes the diameter of the hole 102 as being slightly less than the diameter of the strand 106 (see Fig. 9). Accordingly, Morentz fails to disclose or suggest a guide hole of the cylinder has a flat opening.

Finally, as discussed above, Morentz fails to disclose or suggest a monolithic piston having a string member portion...and the string member portion has a flat belt shape. Instead Morentz discloses a piston 80 including the piston hub 82 receives the terminal head 108 of the flexible strand 106, and a piston 26 that includes a tubular stem 36.

Because Morentz fails to disclose or suggest all of the features of the rejected claims, withdrawal of the rejection is respectfully requested.

III. CONCLUSION

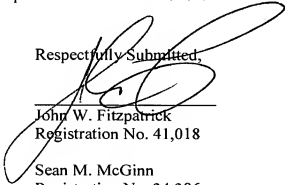
In view of the foregoing amendments and remarks, Applicants respectfully submit that claims 2, 3, 5, 6, 12-16 and 22-25, all the claims presently pending in the Application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the Application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

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Respectfully Submitted,



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